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LI.—*On a new Spider from Calcutta.* By the Rev.
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[Plate XXII.]

Fam. Theridiidæ.

Genus ARIAMNES, Thor.

Ariamnes simulans, sp. n.

Adult female.—Length $8\frac{1}{2}$ lines; length of cephalothorax 1 line, of abdomen $7\frac{1}{2}$ lines.

Cephalothorax.—Length nearly three times the width; oblong, truncated behind, constricted laterally at the fore extremity of the caput, and sides nearly parallel; of a flattened form; profile-line nearly level; a slight impression behind the eyes and an indentation at the thoracic junction. Its colour is yellowish, with some converging lateral markings forming on each side a broad yellow-brown band.

Eyes at the fore extremity of the caput; four form a large central square, the two anterior eyes being the largest of the eight and seated on tubercles; the lateral pairs are nearer to the hind-centrals than to the fore-centrals, the hind-lateral and hind-central eyes on each side being nearly contiguous to each other.

The *clypeus* is a little prominent at its lower margin, and its height is nearly about half that of the facial space.

Legs long, slender; relative length 4, 1, 2, 3; those of the first and fourth pairs greatly the longest. The metatarsi are of moderate comparative length. The tibiæ short; their colour is pale yellowish, the femora and tibiæ of the first pair dark yellow-brown; the tibiæ of the second pair pale yellow-brown; they are furnished with hairs only. The *palpi* are short, yellowish; the terminal tarsal claw is rather long, slender, and sharply bent downwards from its base.

Falces small, straight, furnished with bristles in front.

Maxillæ moderately long, rather broadest towards their extremity (where they are obliquely truncated), and a little inclined towards the labium; they are furnished with some black bristly hairs, those on the inner margin of each being the strongest and directed towards each other. The *labium* is small, short, and of a somewhat truncated form. The colour of the falces, maxillæ, and labium is similar to that of the legs.

The *sternum* is of a very elongate heart-shape or subtriangular, its hinder extremity produced between the coxæ of the fourth pair of legs into a truncated point. Its colour is like that of the maxillæ.

The *abdomen* is of a cylindrical form, its posterior extremity produced into a long, tapering, caudal appendage, the length from the spinners to the extremity being at least four times that from the spinners to the cephalothorax; it is of a whitish-yellow hue, with, on the upperside, a central longitudinal silvery line, on each side of which is a yellow-brown stripe, deepening into dark brown at the hinder extremity; the sides of the posterior half of the tail are marked with short transverse (or perpendicular) dark streaks. The extremity of the tail is sharp-pointed and is clothed with a short dark pubescence. The spinners are short, those of the anterior pair strongest. The genital aperture is of characteristic form, being somewhat oblong-oval, divided by a narrow longitudinal septum.

Like some others of a nearly allied genus (*Argyrodes*) this part of the structure was clogged with a kind of resinous looking secretion.

The example from which the above description has been made was kindly sent to me by Mr. D. D. Cunningham, by whom it was found in the Botanical Garden at Shilpur, Calcutta. Its colour when alive is stated to have been vivid green. This I conclude applies to its *prevailing* hue, which has since gone off (as so commonly is the case with green spiders) into dull yellowish. I should, however, suppose that a close

examination in life would show some silvery lines and longitudinal brownish stripes. Mr. Cunningham adds that the resemblance of this spider to a caterpillar is very remarkable; and no doubt in life the caudal prolongation is mobile.

The genus *Ariamnes* has a very wide range; but I have not before seen an example of it nearer the East Indies than Ceylon.

EXPLANATION OF PLATE XXII.

Fig. 1. *Ariamnes simulans*, ♀, enlarged.

Fig. 2. Ditto, in profile, less enlarged.

Fig. 3. Fore part of the caput, showing the position of the eyes.

Fig. 4. Genital aperture.

LII.—*On the Development of the Pedipalpi.* By Dr. A. STRUBELL, of the Zoological Institute of Bonn am Rhein*.

IN view of our scanty knowledge of the natural history of the Pedipalpi, I made it one of my principal tasks during a lengthy sojourn in the Malay Archipelago to follow out in greater detail the development and life-history of a representative of this group of Arachnida, which offers so many points of interest. As the subject of my investigations I selected *Thelyphonus caudatus*, which, while widely distributed in these islands, is particularly common in Java, where I spent several months.

Guided by the erroneous statements of the text-books, according to which the Pedipalpi are viviparous, I commenced by sacrificing a considerable number of specimens without ever discovering embryos in their genital ducts, until towards the end of October I received a female, to the ventral surface of which there was attached a fairly capacious egg-sac.

I am indebted to my little Malay friends for the gradual acquisition of a larger number of eggs, representing a developmental series, which is not absolutely continuous, it is true, but nevertheless embraces the most important stages.

As regards all details of my results I must refer the reader to a fuller account which I hope shortly to be able to lay before those who are interested in the study of the group; I now merely desire to give a brief outline of the development of the external bodily form.

* Translated from the 'Zoologischer Anzeiger,' xv. Jahrg. (1892), nos. 385 and 386, pp. 87-93.